

Claims

1. A vehicle door, **characterised by**
a supporting frame (10) of high strength steel with side impact guard beam (22),
an outer panel (28) fastened on the frame so that the side impact guard beam will be close to the outer panel,
a beam structure (30) releasably mounted on the frame, and
an inner panel (41) fastened on the beam structure,
the window structure (34-37) of the door being mounted on the releasable beam structure (30) and located between the frame (10) and the beam structure (30).
2. A vehicle door according to claim 1, **characterised in** that the window structure comprises the window frame (34) of the door.
3. A vehicle door according to any one of the preceding claims, **characterised in** that the lock (33) of the door is mounted in the releasable beam structure.
4. A vehicle door according to any one of the preceding claims, **characterised in** that the inner panel (41) is made of plastics.
5. A vehicle door according to any one of the preceding claims, **characterised in** that a major part of the inner panel (41) is covered by a trim (54).
6. A vehicle door according to claim 5, **characterised in** that the trim (54) adjoins the window.
7. A vehicle door according to any one of the preceding claims, **characterised in** that the thickness of the frame (10) is less than half the thickness of the door.

8. A vehicle door according to any one of the preceding claims, **characterised in** that the steel of the frame (10) of the door has a yield strength of at least 800 N/mm², preferably at least 1000 N/mm².
9. A method of manufacturing a vehicle door, **characterised in that** a supporting frame (10) of high strength steel including a side impact guard beam (22) is produced, an outer panel (28) is fastened on the frame so that the side impact guard beam will be close to the outer panel, and a beam structure (30) is mounted on the frame (10), a window structure (34-37) being mounted on the beam structure (30) before the mounting of the beam structure so that the window structure will be located between the frame (10) and the beam structure (30) when the beam structure is in place.
10. A method according to claim 9, **characterised in** that the window structure (34-37) includes the window frame (34) of the door and is mounted on the beam structure (30).
11. A method according to claim 9 or 10, **characterised in** that the lock (33) of the door is mounted on the beam structure before the beam structure is mounted on the frame (10).
12. A method according to any one of the claims 9-11, **characterised in** that an inner panel (41) is mounted on the beam structure before the beam structure is mounted on the frame (10).
13. A method according to any one of the claims 9-12, **characterised in** that a blank of sheet steel is formed to form the frame (10) with integrated impact guard beam (22).

14. A method according to any one of the claims 9-13, **characterised in** that the supporting frame (10) is formed by hot stamping of a hardenable blank and hardened while remaining in the forming tools.